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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,506

04/11/2006

Andreas Ihme

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EXAMINER

KING, JOSHUA

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,506	<b>Applicant(s)</b> IHME ET AL.	
	<b>Examiner</b> JOSHUA KING	<b>Art Unit</b> 2828	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/05/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 12/05/2005 was filed on the mailing date of the instant application. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 8-10, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egawa (U.S. Patent Number 4,876,689) in view of Held et al. (U.S. Patent Number 5,602,515) and Nakajima et al. (U.S. Patent Number 5,072,191).

7. **With respect to claim 8**, Egawa discloses a control device for a gas emitter (Fig. 3), comprising: an HF generator (Fig. 3 element 11) having a feedback (column 4 lines 25-26); a working circuit (Fig. 3 element 13) having a capacitor (Fig. 3 element C31) and an inductive resistor (Fig. 3 element L32), the working circuit having an input connected to an output of the HF generator (Fig. 3 element 12) and an output for connecting to the gas emitter (Fig. 3 element 14). Egawa does not explicitly disclose that the emitter is an excimer emitter or that the generator is constructed as a tube generator. However, Held et al. discloses a HF tube generator having feedback (Fig. 1). The advantage is reduced expenditure for circuit engineering for HF generators having feedback (column 1 lines 52-57). Furthermore, Nakajima et al. discloses the use of an excimer gas (column 7 lines 25-30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an excimer gas, since it has been held to be within the general skill of a worker in the art to select a known

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material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. Furthermore, using an excimer gas has the added benefit of producing radiation in the VUV range which is extremely beneficial for certain applications. It should be noted that in this instance the examiner interpreted "inductive resistance" to be an inductor. An inductor has an inductance and impedance. The impedance is generally governed by a large real part which corresponds to the resistance, derived from the resistance of the wire used to form the coils. Another possible interpretation is any resistor formed of a wire. Currently, traveling through a wire produces an inductance. The examiner took the first interpretation based on a translation of the priority documents. Specifically, the translation of the written opinion.

8. **With respect to claim 9**, Egawa further discloses an HF cable connecting the input of the working circuit to the output of the HF generator (Fig. 3 element 12). "HF cable" has been interpreted to be any cable which transmits a high frequency signal. Clearly the wires in Fig. 3 meet such a description.

9. **With respect to claim 10**, Egawa further discloses the capacitor in the working circuit has a capacitance value greater than a capacitance value of the HF cable and a capacitance value of the excimer emitter connected to the working circuit. This is implicitly disclosed in Egawa. Element 14 will have low capacitance based on its design. Element 12 will also have negligible capacitance. Since element 13 has capacitance it will be greater than either the capacitance of the cable or the laser load.

10. **With respect to claim 12**, Nakajima et al. further discloses the inductive resistor of the working circuit is adjustable (Fig. 1 element 20).

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11. **With respect to claim 14**, Egawa further discloses the working circuit is disposed adjacent the excimer emitter (Fig. 3 elements 13 and 14).

12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device disclosed by Egawa with the tube generator as disclosed by Held et al. in order to reduced expenditure for circuit engineering for HF generators having feedback and to have further modified the device with the excimer gas as disclosed by Nakajima et al. since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Egawa in view of Held et al. and Nakajima et al. as applied to claim 8 above, and further in view of Perzl et al. (U.S. Patent Number 5,097,475)

14. **With respect to claim 11**, Egawa in view of Held et al. and Nakajima et al. do not explicitly disclose output of the working circuit is connected to multiple excimer emitters. However, Perzl et al. discloses connecting the output of multiple emitters to a working circuit (Fig. 1 elements 1). The advantage is to increase the optical output of the device.

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the device disclosed by Egawa in view of Held et al. and Nakajima et al. with the circuit being connected to multiple emitters as disclosed by Perzl et al. in order to increase the optical output of the device.

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16. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Egawa in view of Held et al. and Nakajima et al. as applied to claim 8 above, and further in view of Ma et al. (U.S. Patent Number 6,573,822).

17. **With respect to claim 13**, Egawa in view of Held et al. and Nakajima et al. further disclose the inductive resistor (Nakajima et al. Fig. 1 element 20) having different inductance values (column 7 lines 5-25). Egawa in view of Held et al. and Nakajima et al. do not explicitly disclose the use of multiple taps to change the inductance value. However, Ma et al. discloses the use of multiple taps to change the inductance value (Fig. 27). The advantage is that it allows higher value inductors to extend the operating range of the device (column 1 lines 19-22).

18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the device disclosed by Egawa in view of Held et al. and Nakajima et al. with the variable inductor having taps as disclosed by Ma et al. in order to allow higher values of inductance to extend the operating range of the device.

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Friede et al. (U.S. Patent Number 5,128,622) see Fig. 5. Rothweil et al. (U.S. Patent Number 5,982,795) see Fig. 4

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA KING whose telephone number is (571)270-

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1441. The examiner can normally be reached on Mon.-Thurs. 10:00-7:30 and other Fri. 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joshua King/  
Examiner, Art Unit 2828  
09/18/2008

/Minsun Harvey/  
Supervisory Patent Examiner, Art Unit 2828